INTERNATIONAL

ELETTRORADIO INFORMAZIONI

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sèleco

COLOR TV, VIDEO, HI-FI.

INNOVATORS AND WINNERS

The Company Sèleco has nowadays achieved an important part of the goals that the new shareholding targeted at its entry.For instance, our Company renewed its engagement in research and development of its products; it has gained a stronger presence in Italy with the acquisition of Brionvega; and, thanks to the recent acquisition of the Spanish Elbe, Sèleco was able to put into effect key plans to benefit of the mutual synergies, and reach, jointly with its controlled subsidiaries, a global production exceeding 1,000,000 tv sets a year.

These goals, together with the positive 1991 final balance results, are a significant turning point for Sèleco and, thus, we are allowed to face more serenely market evolutions. In fact, I think that we will meet with important changes in consumers' habits of more developed (industrialized) countries.

Market will most probabl take up a smaller quantity of product, but it will pay more heed to quality and to the suitability of products to satisfy more and more demanding and acquainted consumer's needs.

Sèleco is aware that the increasing attention on the ecological aspects, and the deriving resources consumption, is orienting purchase towards products, which are fit for maintaining their appeals to buyers long. Hence, everything: from design to features to quality and reliability is starting to be better than in the past.

Therefore, every purchase has to guarantee an high expediency ratio between features, conceived as explained above, and consumer price; but, it will be bound to assure a trend of improvement to features and services.

Success of production and distribution companies shall not be obtained by achieving additional volumes but, it has to be mainly sought in a more balanced relation between offered features and prices.Industry, from its side, is compelled to try lowering costs, by seeking, among other possibilities, partnerships and cooperations able to reduce duplication of costs for development of similar products; which unavoidable, affect consumer prices. Sèleco is rapidly moving within such a logic to face the future challenges.

Carlo Corsi
Managing Director
Sèleco S.p.A. - Pordenone - Italy

Sèleco Spa - The Group

KEEPING EXPANDING A LEADING INTERNATIONAL ROLE

Starting as a new reality after the recent acquisition of Elbe, Sèleco is now entitled to play a leading role on major European markets, with a new competitiveness level and a production capacity of over 1,000,000 chassis per year.

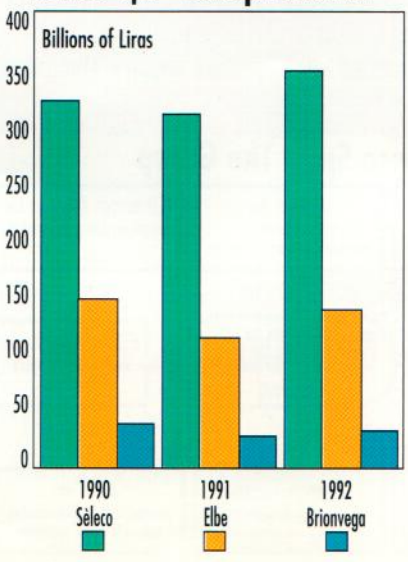
What's new in Sèleco's image and reality abroad today?

G.C.: For many years Sèleco has been taking part to the major European projects concerning innovation in consumer electronics and the deriving know-how has been transferred to develop top quality products. Sèleco's target to take its place among technological leaders, pursued for years with resolution, is starting to give its results. Furthermore, Sèleco is now experiencing a competitiveness connected with multinational factory sources. Products keep merging smart and exclusive design with the highest level of performance, to meet consumers' demands which are becoming more and more sophisticated.

How is Sèleco improving its penetration and importance on the various markets?

G.C.: Well, we can say that a further use of acquisition policy is not to be excluded. Anyway, the goal can be achieved by Sèleco thanks to a widespread organisation consisting of its own trading companies and of its national distributors, with a peculiar experience in consumer electronics and domestic trade needs. Such a network has its key-points in cooperation with retailers and service to customers. And, an enthusiastic and professional Sèleco team is providing constant marketing support to promote our brand in over twenty countries worldwide.
Further to a country by country commitment, a global marketing communication strategy is also adopted to support Sèleco's policy of brand image and acquaintance.

Sèleco Spa - Group turnover



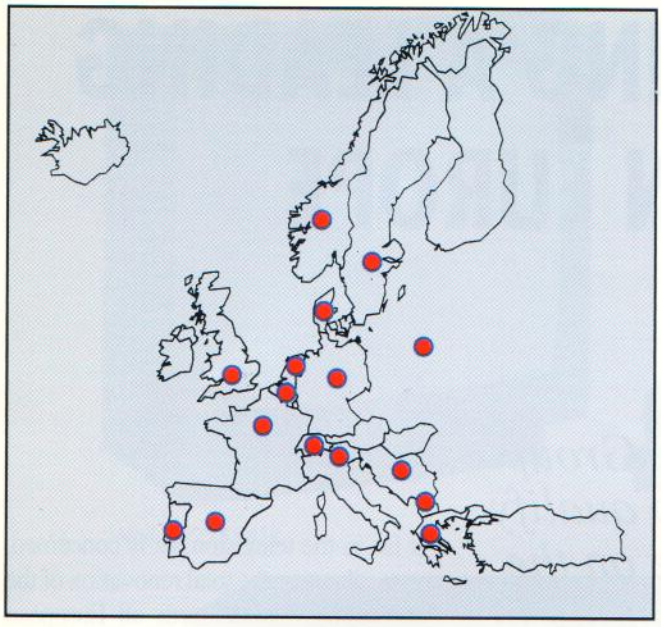
Hence, just to mention some of the activities, Sèleco is present in the most important exhibitions of consumer electronics; it is sponsoring the Motorcycle Race Team "Honda" in the World Championship; it is having an impressive presence in the major Socker Stadiums during international events.

ATTRACTIVE PROSPECTS

The major aim during the next period is to balance and to harmonize marketing and trade policies of the local distribution organisations in each country, so that Sèleco can be a skilled actor in the future Single Market. Such an important event cannot absolutely be missed.

How is Sèleco opposing competition and expanding abroad?

G.C.: To play the role of "Great European Electronics" means not only to offer a wide range of products with high performance/price ratio but, first of all, it means to rely on an avant-guard engineering and flexible manufacturing process, which are actually the keys of success. The experience for over thirty years as reliable source of high quality products, has been giving Sèleco a sort of self-confidence and at the same time a spur to carry out continuous technological and design research.
Sèleco is not only behaving as "national brand" in Italy, Spain, and Portugal, but in confirmation of its expansion trend, Sèleco is also entering the French market; in the beginning with a limited range to acquire



Sèleco Group - European Distribution

Direct sales in Italy, Spain, Portugal and Malta

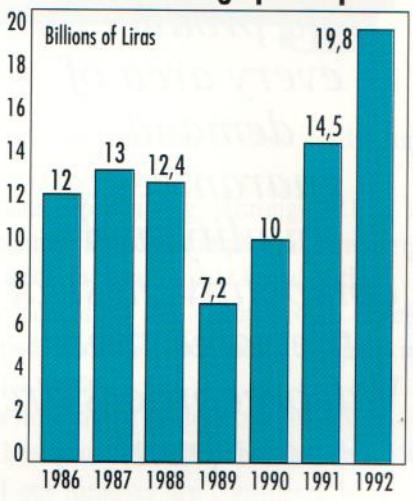
Importers and distributors in Scandinavia, Great Britain, France, Germany, Benelux, Austria, Slovenia, Croatia, Albania, Poland, Israel.

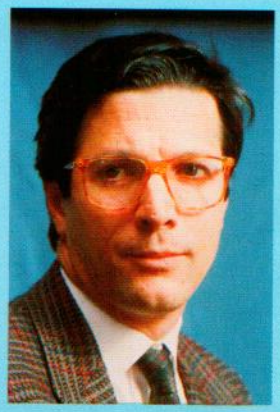
know-how on domestic market and distribution realities and, later on, with the weight of a complete range.
Moreover, starting from the geographical position of our region that has historically been a bridge towards Eastern Europe, and so to meet market demands through a direct presence, Sèleco is proposing itself as a skilled partner and to this purpose has organized a specific structure. A professional and experienced team for technology and know-how business development is dealing with licence contracts, joint-ventures, marketing and sales, and with local production facilities, taking also advantage of the several industrial reorganisations which are presently in progress in almost all Eastern Countries.

What are Sèleco's product range and policy to solve the problem of different broadcasting systems?

G.C.: The range of products distributed by Sèleco network has become wider: 10 inch to 34 inch colour TVs, equipped with European teletext and, for big screens, the optional feature of stereo broadcasts even in Nicam system. All big screen models are PIP prepared, while S-VHS and the hyperband tuner to receive more than 127 channels are current production features. An interesting range of "made in Italy" videorecorders manufactured with Japanese know-how and the new range of "micro" camcorders complete Sèleco's European catalogue.
Sèleco is carrying out "global" product projects in reply to the many broadcasting systems which are still separating Countries: Pal BG, Secam BG, Secam DK, Secam L, Pal I, Pal D, Stereo 2C, Stereo Nicam, Teletext, Top and so on. All of these systems are compatible with new projects and processes; the new 16:9 products are now enabling us to start and develop a really European product for the Single Market of the 2000's. In fact we have a range of 16:9 TVs, which can fully capture potentialities via satellite in D2MAC. The future to hand!

Sèleco Spa - Investments trend Technical locking up of capital





Born in 1949, Giorgio Costacurta started up working in consumer electronics in the early 70's as designer in the dynamic world of high fidelity. After a long experience in planning and marketing, in 1984 he took on the responsibility of Product Marketing for Sèleco S.p.a.
In 1987 he joined the export management for Northern Europe. After a brief step within Stern brand as Sales Manager, he became in 1989 Export Marketing & Sales Manager, and from 1990 with the responsibility of Sèleco Foreign Subsidiaries.

SELECO, IMPROVING A LEADING PRESENCE IN EUROPE

The growth of Sèleco is definitely linked to a process of internationalization that had a sudden acceleration recently. Which goals is this strategy in response to?

M.C.: The new boost that Sèleco intended to give to the European market bears in mind a need to otherwise qualify its presence in the most important countries. Up until now, we were placed in niche areas, the result of a particularly selected product and distribution policy.
As we did not consider a direct growth of market share possible, due to the substantial stagnation of the market, we chose the strategy of taking over companies already operating. This policy involves not only an economic and managerial effort, but mostly, an effort in terms of products.
Therefore, we've further accelerated the product development cycle that today is genuinely able to offer a total coverage of the markets/segments.

The Italian Group is striving to qualify its presence on the continent aiming at a wider coverage of the market. The right product for every area of demand, guaranteeing quality and competitiveness at the same time. Videorecorders are out front.

Mod. Chorus 25.

THEY ARE BETTING ON THE 16:9

And about the evolution of products go?

M.C.: We are working in two directions. In the first place, we're widering the range, trying to choose productions and products with a high level of technology and performances. Secondly, we are coordinating the productive integration process between the various factories of the Group, as to find a clear and effective productive "mission" for each of them.

As far as the television set is concerned, we are planning the total renovation of the entire range. This regards all European countries, including Italy. In addition, Sèleco is continuing its collaboration with other European companies for the development of a line of products with 16:9 format for which we expect a significant demand in the medium term.
However, Sèleco's main commitment is connected to innovation: new features and new uses for the television set. The future of the TV set is a more enthusiastic and interactive relationship with the user. And in this direction, we are developing a product that will realized by the end of the year.
With reference to videorecorders are concerned, about 100,000 of them leave our factory in Campoformido every year and they almost completely cover Sleco's current needs. As for the camcorder, we're significantly expanding the range, especially for the necessity to cover other markets, like Spain and France, for instance.

And Audio?

M.C.: There'll be the evolution of the current range, together with the introduction of new products. We are talking with Sony about the mini-disc. Soon Sèleco will soon be able to add a couple of those articles to its product range. In the meantime we're also keeping a close eye on the DCC system.
For car stereos, we've started a cooperation with important companies in the Far East and this will lead to the introduction

Mod. 21/25 SS 653.

Mod. SVM 2300.

Mod. SVS 500.

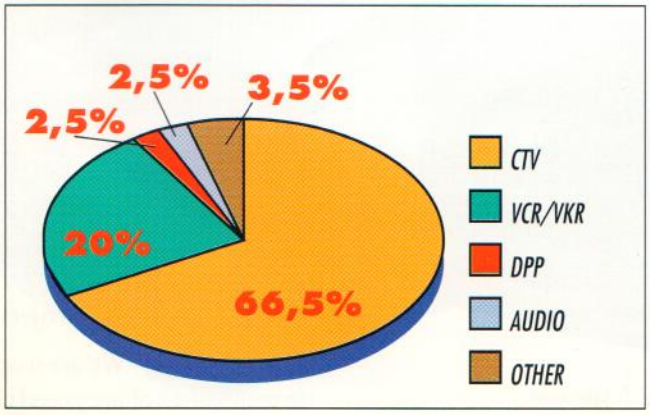
of an innovative range of products starting in the spring of 1993.

Sèleco's commitment to non-consumer products deserves a separate talk.

M.C.: We have successfully pursued diversification policies in sectors that have a lot of similarities with our main product.

For instance:
•pay-TV developed jointly with TELE+;
•the development of videoprojection where we maintain a clear leadership position in Europe;
•data broadcasting. Through S.I.T., a recently founded company, it is creating a new standard of data broadcasting;
•products for low vision people developed in collaboration with a company in that sector;
•a new line of professional monitors.
These products that are now less than 5% of our turnover are considered by as a worth field for investments as they represent a development basis and a testing ground for future applications.

Sèleco Spa - Product Mix
1991 turnover product share



Born in 1952, Maurizio Cini joined Sèleco Design Quality Dept. in 1977. In 1983 he became within Marketing Dept. responsible for trading Sèleco's products. In 1988 he became General Manager of Selind, a Sèleco satellite company based in Campoformido (Udine) devoted to VCR production. Nowadays he is Director of Sèleco Planning Department.

TECHNOLOGICAL EVOLUTION PASSES THROUGH SELECO

High definition, improved definition, liquid crystal display, digital television. The range perfectly describes the commitment of the Italian company, authoritative partner for technical and scientific collaborations in Europe.

Sèleco is involved in Vision 1250, an organization parallel to Eureka '95. What is it about?

D. T.: It is a consortium of entities and companies that concentrate their efforts mostly in two directions. It produces programs in high definition and promotes the standard of Eureka '95 high definition throughout the world.
In this framework, Sèleco participates by making its videoprojector available for demonstrations; the product that undoubtedlydraws the most attention right now.

Does this mean that the Sèleco videoprojector is awaited in a "fireworks" world tour?

D.T.: Exactly. Actually, the tour began with the Winter Olympic Games that were held in Albertville, France in February. All the most important sporting and non-sporting events on the agenda for 1992 will be covered by Sèleco: the Seville Expo, the European Soccer Championships, the International Broadcasting Convention in Mexico City, the National Convention of Broadcasters in Las Vegas, the IBC in Amsterdam, the Barcelona Olympic Games, and so on.

100% HIGH DEFINITION

What do these demonstrations comprise?

D.T.: In addition to the videoprojector, obviously, we also guarantee technicians for all types of assistance. After all it's a lot of moving around. If up until now our involvment regarded mostly the technological development of the product, now this equipment has become a reality. Moreover, our videoprojector is currently the only one that guarantees a 100% high definition.

Mod. Broadway.

Having talked about Sèleco's commitment to Vision 1250 with the proper emphasis, is its work in the Group of twelve in Eureka '95 continuing simultaneously?

D.T.: Our commitment is keen to cover projects pertaining to the non-broadcast field. This means interest in the medical and institutional sector in the broadest sense, electronic cinema, the community and teaching sector that might be civil or military. In short, all that goes beyond consumer applications.

So you're waiting for the high definition television set to arrive. If all goes well it will be in 1995. You are working in the direction of the so-called improved quality...

D.T.: That's right. It's the most realistic solution. We've set the goal to bring out a product on the market, a television receiver with a picture format of 16:9 with improved quality for the end of 1993.

Speaking of improved quality, is Sèleco still part of the Jessi/IQTV (Improved Quality Television) project?

D.T.: Naturally. We are working in Jessi to realize a set of integrated circuits for an

R&D Project

Video digital elaboration

Project EUREKA 95 - HDTV	developing of chip for band width compression HD developing of front projector in 1987 front projectors for Barcellona '92
Project JESSI - IQTV 95	developing of chipset for Improved PAL (cross colour effects free) compatible 4 : 3 and 16 : 9
Project RAI - IQTV	developing of prototipe TV in 1987 developing of chips in 1991

Control of large LCD

Project FELICITA - ESPRIT	Ferroelectric Liquid Cristal Display developing of chip for HD Display in Office Automation
Project CITAD	Selenia, Sèleco, Italtel, Telettra, RAI, SGS developing of 14" display in 1991

Multimedia communication

Project TELECOM - CNR	developing of multimedia work station in 1990
Project TELESOFTWARE	developing of Telesoftware receiver for PC

improved quality television receiver with a low price. Right now it's the only feasible way. It's always desirable to have a slow and gradual evolution when it comes to high definition so that the final user can easily approach the novelty and get used to expect a superior quality picture.

So when it comes to digital television Sèleco is also doing important things.

D.T.: Right. In fact, Sèleco has joined another European project called Race DTTB (Digital Terrestrial Transmission Broadcast) to look after two aspects. The first one regards modulation processes of digital signals. The second one concerns both equalization and problems connected to the broadcast channel.

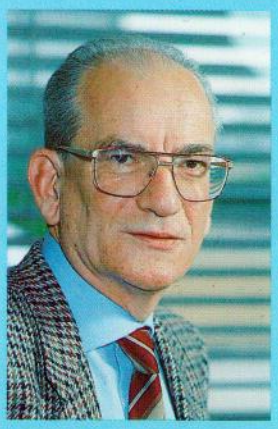
Lastly, Sèleco and the Esprit project.

D.T.: As it's known, this is a research project on the development of a liquid crystal display with A4 format. Well, the work is proceeding very positively. We intend to convert our CRT videoprojector that usesing to a videoprojector that uses liquid crystals as a "light valve".

In conclusion: Eureka 95, Jessi, Esprit, DTTB. You could say that Sèleco is rightly defending the technological development that involves the receiver?

D.T.: I'd say that's exactly how things are. This should be seen in the view of expanding the range of videoprojection products that span from consumer products to high definition, in a context that foresees the use of CRT technology up to 1995. Then, we should gradually move on to liquid crystal products, depending on how fast the market picks up.

Mod. HD 1250 FP.



Born in 1934, Dante Tognetti started up as Research & Development at Fiar (Milan) a TV manufacturer in the early 60's. In 1968 he joined Zanussi Elettronica as Quality Manager and from 1972 he was Planning Dept. Manager. In 1983 after a deep full immersion in the Japan technological universe approached in 1984 the total responsibility of Research & Development Direction.

SOPHISTICATED TECHNOLOGIES FOR ADVANCED PRODUCTS

Future Sèleco products go through the design department, one of the sources of pride of the Italian company. It is known that the company makes a large commitment to research and technological development. And the results are remarkable.

How has technological development in Sèleco benefited consumer products?

G.L.: It is well known that our company holds research and technological development in great esteem and this naturally, is an important advantage when we get to the production phase. As regards videoprojection, the benefit concerns the high definition videoprojector. More in detail, Sèleco, makes professional products that, when connected to a computer, allow the projection of information and data on a big screen and in high definition.

THE FUTURE IS DIGITAL SIGNAL

And in the framework of research applied to television broadcasts?

G.L.: As regards TV broadcasts, instead, the future is definitely made up of processing signals with digital techniques. This is a sophisticated technology that is destined to have an effect on the consumer product, namely, the domestic television set.
Where this is concerned, Sèleco is working on an ambitious project: a television set that will be placed in the highest market bracket and will be equipped with a very "intelligent" digital device...

Are you referring to the up converter?

G.L.: Certainly. Not the one commonly known that repeats the previous line, but rather a device designed and patented by our company that influences the horizontal and vertical resolution of the picture by doubling the lines, with the advantage of much better clarity, greater precision in the reproduction of details and considerably more faithful chromatic output.
The doubling of lines, or more specifically, the non-broadcasted lines that we add are generated ex novo by the interpolations of successive panels.

Mod. 28/25 SS 757.

Which other patents are you working on?

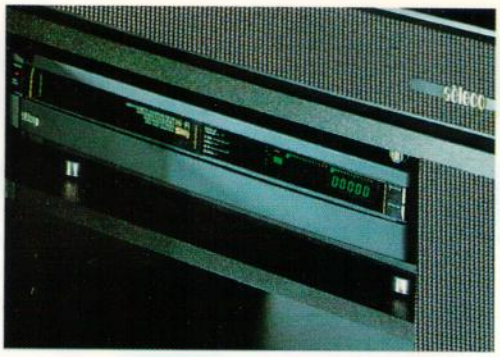
G.L.: We're working on an "intelligent" remote control. In addition, as regards the television set with 16:9 format, we've patented some new tension synthesis systems as well as innovative, internal circuit solutions. And we're working on the latest generation of the decoder for pay-TV.

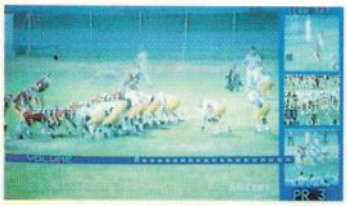
Can you give us a preview of some features of that device?

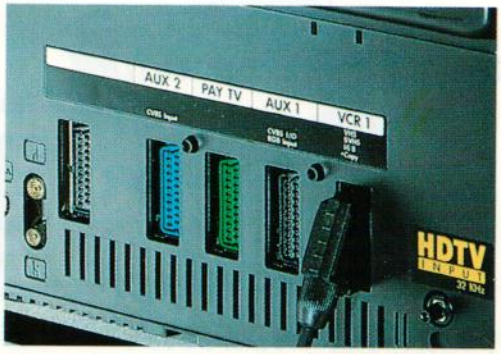
G.L.: Its' a decoder that maintains the previous coding system for obvious reasons of compatibility, but that is definitely inclined towards the more rational use of the device by the user. I mean that through a different type of connection it gives back on the decoder the scart socket of the TV, used to connect the decoder. This product will be available by the end of 1993.

After having had a close look at the technological growth of Sèleco, let's talk about what's new in the design field.

G.L.: We are innovative in the mechanical sector too.
Special technologies (blow moulding),







with excellent results for the acoustic and aesthetic finish were applied in the design of new styles of speaker boxes. And it's been some time now that we make small TV sets having a really valuable aesthetic finish, though not providing for the last step, painting the cabinet. We must emphasize that all the design phases that are naturally computerized are done in three dimensions.

At this point, let's talk about a key subject: the aesthetics of the Sèleco product.

G.L.: Yes, we must have a separate talk about aesthetics. Sèleco has always held the design factor in great consideration. It's extremely important from the point of view of the product's appeal.

Not by chance, at the beginning of this year an agreement was signed between the Group and the prestigious Domus Academy of Milan, a post-university school famous all over the world for being the cross-roads of fashion and international, industrial design. The agreement consists of the study of design and aesthetic solutions worked out by a group of young, international designers, projected towards what will be the near future.

Mod. LC 1510.

Giorgio Liverotti was born in 1947. After earning a diploma in Telecommunications, his first job was in Milan at General Electric. One year later, he left the company to work in the Research and Development Dept. of Siemens, Italtel today, looking after telecommunications and military electronics. In 1978, he moved to Model Racing, where he worked with videogames. The move to Sèleco came at the end of 1982. First in advanced design, then in succession: product design, research and development and product planning. Currently, he is in charge of electrical and mechanical design, industrial design of product industrialization as well as the quality control workshops.

QUALITY, FLEXIBILITY, HI-TECH. THE SELECO STRENGTH

What do Sèleco factories offer in terms of innovation of production process?

L.F.: The major novelty in technological development is SMT (Surface Mounted Technology) which is fruit of large investments in the consumer and professional products. To meet demand the factory has been reorganized and automation has been introduced, involving first of all the final lines, assigned to finished goods. Automation has now reached 50%. All factories work in a flexible way, to meet market request, i.e. more than 150 models; therefore all innovative ideas are channelled to satisfy demand. Obviously Sèleco production cannot be strictly limited by lines specialized in the manufacture of one single model. In fact all lines can produce the whole range, according to customer's requirements.

Factory automation, robotics. To what extent do these concepts affect Sèleco's factories?

L.F.: All lines, especially at Vallenoncello (Pordenone) television factory, are connected with the network by a complete information system. A fully automatic system, which follows the 5 final lines, connects everything with the central information system, from palletization onwards. Therefore we have a complete picture of production situation in real time with advantage for each department and planning. In other words factory work is constantly monitored.

Which are the mostly automated production phases and which are fully manual?

L.F.: 70% of product is manufactured by automatic machineries, especially loom assembly of pieces. The final part is almost fully automatic: only tests are partly manual. For packing products are divided and palletized using bar codes, as soon as they come off the final lines.

In 1991, we developed a product quality program called "Customer Satisfaction". We work with the most modern techniques of qualitative management to solve different problems of product defects that appeared. With consequent results of strong success.

FACTORY INVESTMENT OF FIVE BILLION

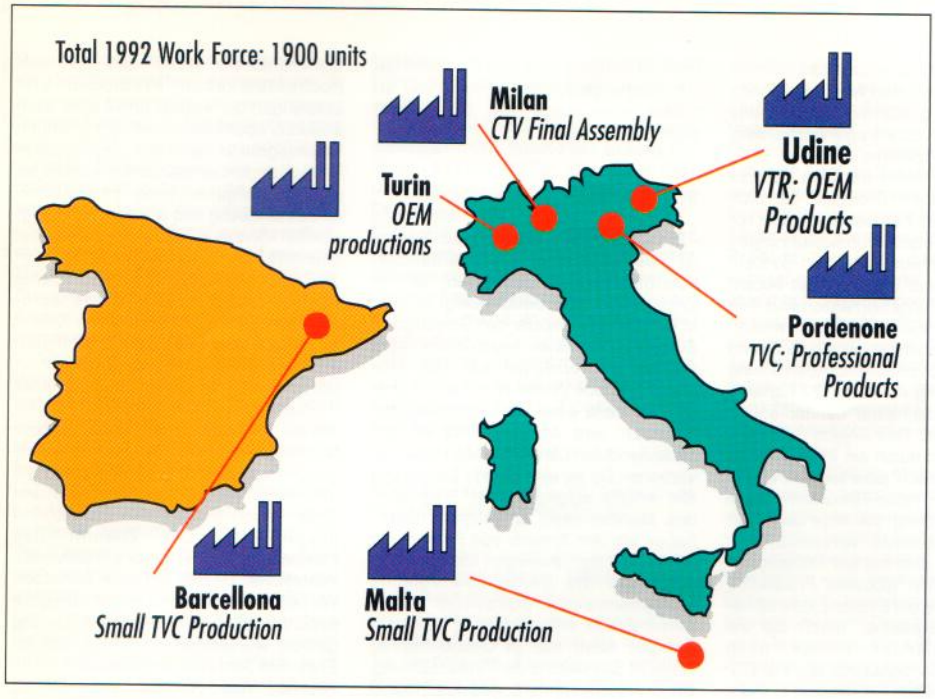
How much does Sèleco intend to invest in modernizing its factories? Is there a continuous modernizing process or it is cyclic, periodical?

L.F.: Modernization of the factories is a constant process according to product evolution. Nowaday product has a lifecycle of one year and half and in the meantime we invest about five billion to improve technology, service and consequently product quality. All Sèleco staff is committed to quality.

"Just in time" production: is it followed at Sèleco?

L.F.: There is no real "Just in time" method at Sèleco. On the television line we have the so-called "continuous flow manufacturing". In other words we have a mixture between "Just in time" and CFM in our factories; the lines work on a daily programme which is planned weekly in a continuous flow, with no "work in process" among lines.

Sèleco Group - Plants Location



sèleco

ONE MILLION TV SETS PER YEAR

Which kind of production are Sèleco factories designed for?

L.F.: Let's start with Vallenoncello (Pordenone) factory, which has 900 employees including Commercial staff. It is specifically oriented to consumer production and it turns out about 300 thousand televisions per year. In the same plant is started a new department producing video projectors HDTV monitors, displays with high quality and high performance standard.
Milan plant specialized for special aesthetical design tv sets, where is most important the sophisticated technologies of final assembly. Barcelona plant produces with SMT technology about 100.000 TV sets per year. The range is 70% 14" screen and 30% big screen models. Malta plants, operative since 1985 and employing 135 people, produce about 200.000 sets per year 14" and 15" screen colour TV sets both for export and for Italian market. Selind at Campoformido (Udine) is controlled by Sèleco and produces 140.000 videorecorders a year with a staff of about 60 employees and furthermore has a Professional Products Division employing more than 270 people, producing for third parties. None factory (Turin), with 173 workers, operates in the electronic system sub-supply for information technology and telecommunications markets.

What about subcontractoring production?

L.F.: It is specialized in the sub-supply of high technology parts and components both in terms of quality and manufacturing standard. Heavy investments have been made by this Division, especially in SMT technology. However, as a proof of an avantguard technology menu, considerable progress has also been made in testers and systems, and at None factory there is the largest "vapour phase" soldering plant in Europe.

And as far as consumer electronics is concerned?

L.F.: Television set is still Sèleco most key-product. As we already said, we are currently producing about half a million sets a year and quantity is increasing, ranging from 14" to large screen models. There are continuous technological and qualitative innovations. Particular attention is given to "Quality" and all Sèleco staff is committed to achieve aims stated in Yearly Quality Targets, which are planned to meet customers' needs.

Born in 1945, Lorenzo Fonda started up at Zanussi in 1968. Considered an expert in telecommunications, he has always been working at Production Dept. Chief of Sèleco's Campoformido factory from 1981 to 1984, until 1990 he closely followed the Professional Products Division. Since 1st January 1991 he took on responsibility of all Sèleco's production, both professional and consumer.

TECHNOLOGY AS A FINE ART

sèleco

COLOR TV, VIDEO, HI-FI.